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2d Session

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THE DEFENSE BUILDUP AND THE ECONOMY

A STAFF STUDY

PREPARED FOR THE USE OF THE

SUBCOMMITTEE ON ECONOMIC GOALS AND
INTERGOVERNMENTAL POLICY

OF THE

JOINT ECONOMIC COMMITTEE
CONGRESS OF THE UNITED STATES

FEBRUARY 17, 1982

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Congress of the United States

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(CREATED PURSUANT TO SEC. 5(a) OF PUBLIC LAW 304, 79TH CONGRESS)

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February 10, 1982

Honorable Henry S. Reuss
Chairman
Joint Economic Committee
Congress of the United States
Washington, D.C.

Dear Mr. Chairman:

I am pleased to transmit a study entitled "The Defense Buildup and the Economy." The study was prepared by Richard F. Kaufman of the Committee staff.

Sincerely,

Lee H. Hamilton
Chairman
Subcommittee on Economic Goals
and Intergovernmental Policy

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INTRODUCTION

by

CHAIRMAN LEE H. HAMILTON

I support the goals of building up our defense program and enhancing national security. But these goals cannot be attained merely by spending more money. It is preferable for the buildup to proceed at a moderate and sustainable rate without strong fluctuations upward or downward. For the buildup to be successful, it should proceed with due regard for the effects on the Federal deficit and the health of the economy.

Defense budgets, because of their size and potential influence on the national economy, must achieve a balance between spending so little that defense is weakened and spending so much that there are harmful economic effects. There is substantial evidence to conclude that as presently planned the defense buildup will contribute to widening Federal deficits and to industrial bottlenecks and inflation. It is also possible that the buildup will worsen the problem of cost overruns in defense procurement.

To avoid these problems, it will be necessary to restrain the growth of the defense budget. The pace of the buildup needs to be moderated for three reasons:

* As presently planned, the buildup is likely to worsen the problems of industrial bottlenecks and cost overruns in defense procurement.

* In the longer term, when sustained economic growth is attained, the buildup may add to inflation in the general economy.

* Moderating the pace of the buildup will reduce the deficit and avoid the potential harm of the deficit to the economy.

No magical significance should be attached to any particular rate of defense spending increase. The important thing is to carefully plan for strengthening defense without weakening the economy. It is equally important for the Defense Department to control cost overruns which threaten to undermine our defense goals. Greater attention needs to be paid to the effects of the present buildup on the industrial base, the general economy, and the management of defense programs.

The following steps should be taken:

1. The real rate of increases in defense spending should be reduced from the President's current proposal.

2. Estimates of future defense spending should be based on the defense deflator which measures inflation in the defense sector.

3. The Council of Economic Advisers should, in cooperation with the Defense Department and other statistical gathering agencies, develop and coordinate an information system to enable the government to monitor and forecast the effects of changes in the defense budget on industry and the general economy.

The staff study that follows is an assessment of the likely economic effects of the defense buildup, based on testimony and information received during hearings conducted by the Subcommittee on Economic Goals and Intergovernmental Policy during October 1981 and updated with information from the Administration's budget proposals for Fiscal Year 1983.

THE DEFENSE BUILDUP AND THE ECONOMY*

SUMMARY AND FINDINGS

Summary

The defense buildup proposed by the Administration is the largest in our peacetime history. During 1981-87, defense outlays are scheduled to rise from $160 billion to $364 billion. The annual rate of increase will vary from year to year but is estimated to average about 7.5 percent in real terms.

The buildup is comparable in important respects to the one that occurred during the Vietnam period. Defense budget authority increased by 34 percent during fiscal years 1965-68. In fiscal years 1981-84 defense budget authority will increase by nearly 30 percent. Relative to GNP, the Vietnam buildup was larger and more rapid. Defense rose as a share of GNP from 7.2 percent to 8.8 percent in the period 1965-67. In the period 1981-85 the defense share will rise from 5.6 percent to about 7 percent and to 7.4 percent by 1987.

The increases for procurement are more nearly equal during the two periods. Real budget authority for defense purchases increased by about 9 percent per year during 1965-67, slightly below the rate estimated for 1981-85. This

*This study was prepared by Richard F. Kaufman, Assistant Director of the Joint Economic Committee. The helpful comments to an earlier draft of this study by Lawrence R. Forest, Jr., James G. Galbraith and John Hare, are gratefully acknowledged.

comparison is important because the present buildup is concentrated in defense purchases while during Vietnam there was a balanced expansion of purchases and manpower. Most of the direct economic effects of the defense buildup will be on the defense industries.

Findings

1. The rapid pace of the defense buildup will add slightly to inflation in the short term and could add greatly to inflation in the longer term unless offsetting fiscal or monetary actions are taken.

2. The buildup may worsen the problem of procurement cost overruns.

3. The buildup is exacerbating regional imbalances in the national economy.

4. Limited bottlenecks now exist in the defense industries, especially among smaller prime contractors and subcontractors due to shortages of some critical components, production equipment, materials and skilled workers.

5. Inflation in the defense sector could increase the real costs of defense by as much as $80 billion by 1987 over official estimates.

6. The bottleneck problem could become widespread in the next several years unless the supply of scarce resources, including skilled workers, is greatly increased.

7. If the supply of scarce resources is not greatly increased, the shift of resources from the civilian to the defense sector will worsen and reduce U.S. competitiveness in the world market.

8. If the bottleneck problem becomes widespread, price and wage increases could spill over to the civilian sector.

9. The lack of adequate information and statistics about defense and nondefense industries on a disaggregated basis concerning capacity utilization, skilled labor and the availability and requirements for other resources is hampering the government's ability to monitor and forecast the effects of the defense buildup.

1. Background

In October 1981, the Subcommittee on Economic Goals and Intergovernmental Policy of the Joint Economic Committee, chaired by Rep. Lee H. Hamilton, held hearings about the economic effects of the defense buildup. The hearings grew out of widespread concern in the general public and in Congress over the consequences of the buildup for the economy. The purpose of the hearings was to obtain and examine information and expert opinions on all sides of the issues.

The Joint Economic Committee has been studying the economic effects of defense spending for many years, and has held numerous hearings and issued a number of reports and studies on this subject.

The Subcommittee held four days of hearings in October. The witnesses included spokesmen for the Administraton, the director of the Congressional Budget Office, and economists and specialists from the private sector. The following is a complete list of the witnesses and their affiliations:

Murray L. Weidenbaum, Chairman
Council of Economic Advisers

Jack R. Borsting
Assistant Secretary of Defense (Comptroller)

John W. Beech
Director for Plans and Systems
Office of the Assistant Secretary of Defense
(Comptroller)

John Matino, Director
Material Acquisition Policy
Office of the Deputy Under Secretary
(Acquisition Management)

Office of the Under Secretary of Defense for Research and Engineering

Alice Rivlin, Director
Congressional Budget Office

Robert Hale, Assistant Director
National Security and International Affairs
Congressional Budget Office

Lawrence R. Forest, Jr. Principal Analyst
National Security and International Affairs
Congressional Budget Office

Charles L. Schultze, Former Chairman
Council of Economic Advisers

George F. Brown, Jr., Vice President
Data Resources Inc.

James R. Capra, Senior Economist
Federal Reserve Bank of New York

Jacques S. Gansler, Vice President
The Analytic Sciences Corporation

Gail Garfield Schwartz
Garfield Schwartz Associates

Lester Thurow
Massachusetts Institute of Technology

The findings and conclusions in this report are based on the testimony received from the above witnesses as well as testimony and information obtained through other recent Committee hearings and inquiries into defense and the economy. Among the major topics discussed during the hearings were the accuracy of estimates of future defense spending, inflation, bottlenecks, sectoral and regional effects, and the adequacy of information.

2. Accuracy of Defense Spending Estimates

The defense budget is scheduled to increase from $160 billion in 1981 to $364 billion in 1987. The annual rate of

increased outlays is estimated to average 7.5 percent in real terms. The increase proposed by the Administration for fiscal year 1983 is 10.5 percent.

Although the estimates of future defense spending are quite high, they are probably understated. The reasons for the understatement have to do with assumptions about future inflation. In making its estimates of future defense spending, the Office of Management and Budget assumes that there will be less inflation in the defense sector than should be assumed by historical standards. All estimates of future government spending are based in part on estimates about future inflation. OMB's error in the past has been in assuming that the inflation rate in the defense sector will be the same as inflation in the general economy.

Several years ago, the Joint Economic Committee helped initiate a program designed to break out inflation in the defense sector from inflation in the general economy. This effort culminated in the development of a defense deflator by the Bureau of Economic Analysis of the Department of Commerce. The defense deflator, which is based on information about actual defense prices derived from tens of thousands of defense purchases, shows the level of price changes in the defense sector. It is a part of the National Income and Product Accounts and is published monthly in the Survey of Current Business.

Inflation in the defense sector, as indicated by the defense deflator, has exceeded inflation in the general

economy every year since 1975, with the exception of 1979. The difference between inflation in the defense sector and inflation in the general economy is illustrated in Table I which compares the DOD deflator with the GNP deflator.

TABLE I

DOD AND GNP PRICE DEFLATORS
ANNUAL RATES OF CHANGE
(Fiscal Years, Percentage Changes
From Previous Year)

Year	DOD Deflator	GNP Deflator
1975	12.5%	10.8%
1976	8.8	6.9
1977	8.5	5.6
1978	8.5	6.8
1979	8.0	8.7
1980	14.6	9.2
1981	13.4	9.9

Note: DOD Deflator excludes compensation.

Source: Data Resources, Inc.

The fact that inflation has been higher in the defense sector than in the general economy over the past several years does not mean this trend will automatically continue in the future. However, private forecasts conclude defense costs will rise faster than the average rates because of the types of things the Defense Department buys. Thus, the recent trend shows defense costs have been increasing faster than the average rate and econometric simulations indicate they will continue to do so.

By using a lower estimate of inflation than is suggested by the DOD deflator and private forecasts, the Administration has opened up what may be termed a defense inflation gap, namely the difference between what defense spending is likely to be under realistic assumptions about inflation in the defense sector compared with the official OMB estimates. This gap is projected to be as much as $80.0 billion for fiscal years 1983-87. That is, assuming inflation in the defense sector consistent with the DOD deflator for recent years, it could cost about $80.0 billion above the level of current defense spending estimates to purchase the same amount of goods and services assumed by the Administration's budget.

In discussing this matter during hearings before the Subcommittee on Economic Goals and Intergovernmental Policy in 1981, spokesmen for the Administration readily conceded that inflation has been higher in the defense sector than in the general economy and that current estimates of the actual costs of the defense buildup are too low. The major

argument for continuing to use the same inflation estimates for all portions of the government's budget appears to be that using a higher inflation estimate for one portion of the budget, such as defense, would transform the higher estimate into a self-fulfilling prophesy. Implicit in this argument is the idea that using a lower estimate will help prevent inflation in the defense sector from going higher.

This argument is incorrect and unrealistic. Using inflation assumptions that are too low by historical standards has had no deterrent effect on defense inflation in the past and is not likely to be a deterrent in the future. The same can be said about assumptions about inflation in the general economy, which also are frequently unrealistically low. Unrealistic inflation assumptions are damaging because when actual costs exceed budget estimates due to inflation rates that are higher than anticipated, defense officials must either curtail or stretch out programs or request supplemental appropriations. Partly as a result of this unrealistic approach to defense spending estimates, a number of defense programs in recent years have been curtailed, stretched out, or cancelled. This increases defense costs in the long run and has adversely affected efforts to improve readiness, the spare parts inventory, and the level of training.

Only were DOD officials to act to avoid stretchouts by curtailing programs when costs exceeded expectations could, if this experience were repeated over a period of several years, low inflation assumptions drive down costs. Under

such a policy, great care would have to be taken in program management to assure that available funds are sufficient to finance authorized programs. But this approach would be inconsistent with the policy of achieving a stated rate of real increase in defense spending.

It is noteworthy that in the Fiscal Year 1983 defense budget proposals the future costs of defense purchases incorporate inflation estimates that are about one percentage point higher than the nondefense inflation estimates. Those who criticize the Defense Department for being unrealistic in inflation expectations believe this is a step in the right direction.

Realistic inflation assumptions will not solve the problem of rising defense costs, and using such estimates would require increased efforts to reduce waste and inefficiency. A major advantage of using realistic assumptions is that they would enable Congress and the public to understand at the outset the full costs of future defense budgets and the implications for the rest of the economy when defense decisions are made.

3. Inflation and Deficits

The size and rapid pace of the defense buildup lead some persons to conclude that it will add significantly to inflation in the general economy. This conclusion is partly based on a comparison of the present buildup with the one that occurred during the Vietnam period. It is argued that

just as inflation ensued from the Vietnam buildup so will it be intensified by the present buildup. Some economists, such as James R. Capra, also believe that the stimulus to aggregate demand from defense spending will mean "a higher inflation rate for the next few years than would be the case without the defense buildup, even if the Federal Reserve were not to accommodate the extra government spending." The Administration disputes these contentions.

Another problem is the extent to which defense expenditures add to Federal deficits. In theory, defense spending can be viewed as a source of fiscal stimulus which can aid recovery from an economic downturn. Under present circumstances, the defense buildup will add to the unusually high and widening deficits, and thereby put pressure on interest rates, discourage private investment, and contribute to a sluggish recovery from the recession.

Murray L. Weidenbaum, Chairman of the President's Council of Economic Advisers, testified that what made spending inflationary during the Vietnam war was not that the funds were used to purchase weapons and manpower for the war effort, but that the level of spending was not reduced elsewhere, and that monetary policy was deliberately expansionary. Chairman Weidenbaum said that the Vietnam buildup was inflationary because it involved a surprise, sudden shift in the pattern of resource utilization, and because it was accompanied by an increase in nondefense spending as well as an expansionary monetary policy. The defense spending surge led to short-term inefficiencies and

higher prices in the defense sector, while the expansionary fiscal and monetary policy produced a longer term inflationary problem.

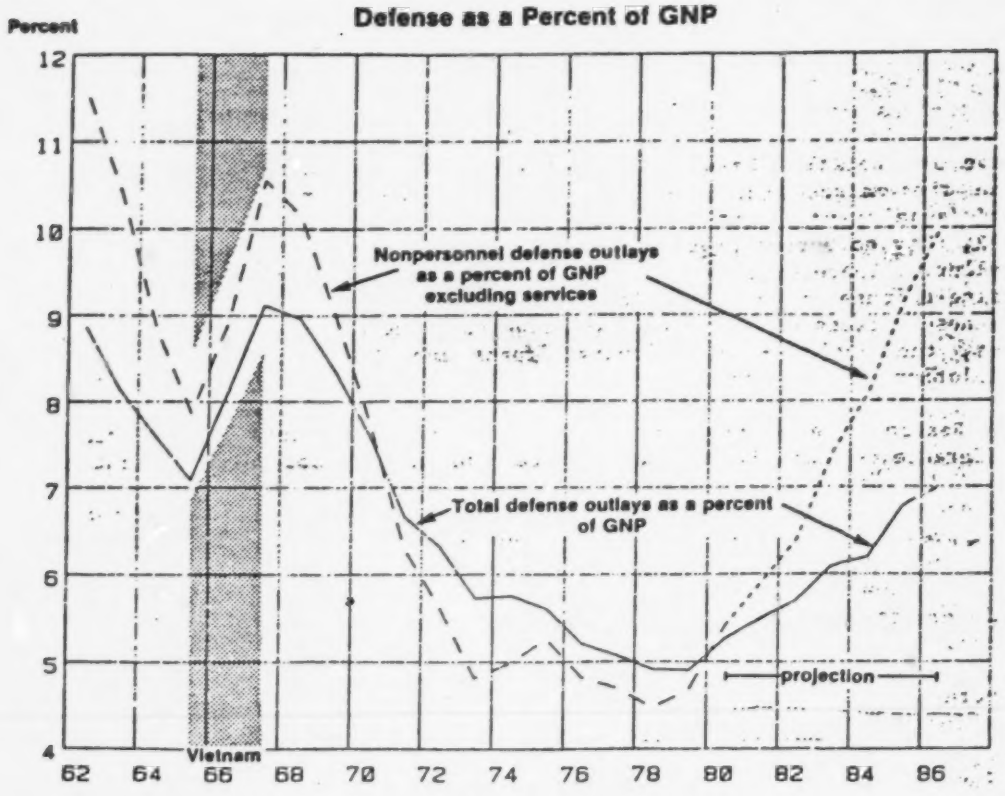
The Administration believes that the present buildup is not an unplanned surprise or sudden surge, but rather a gradual planned buildup over several years. The Administration also argues that, while the defense spending increases are very large, they are too small a proportion of the Gross National Product to create inflationary pressures by stimulating excess demand. This is especially the case in a period such as the present one of low capacity utilization. According to this line of reasoning, there is sufficient excess capacity to absorb additional defense spending because the economy is operating well below its potential in terms of both manufacturing capacity utilization and unemployment.

The Administration's argument that the present buildup does not involve a sudden shift of resources, as occurred during the Vietnam period, is borne out if the changes in defense spending are compared with the GNP. However, the rise in procurement spending will be greater under the present buildup than was the case during Vietnam. In 1965-68, procurement increased from 7.9 percent of the manufacturing base to 10.6 percent. In 1980-86, procurement will increase from 5.4 percent of the manufacturing base to 10 percent.

This comparison is important because the two buildups differ in composition. During the earlier one there was a surge of spending for manpower as well as procurement and the effects of that spending were felt throughout the economy. The present buildup emphasizes procurement and the effects of that kind of spending will be concentrated in the manufacturing sector. There will be a surge in defense spending as far as the manufacturing sector is concerned. The issue is, can industry respond quickly and smoothly to the procurement surge without exerting inflationary pressures on the economy?

Chart 1, prepared by Dr. Gary Wenglowski, compares procurement (nonpersonnel defense outlays) as a percent of the manufacturing base (GNP excluding services) during the Vietnam and the present buildup. The surge in procurement leads Dr. Wenglowski to conclude, "The rise in defense spending planned by the Reagan Administration is likely to put more inflationary pressure on the economy than many of the conventional analyses have indicated."

Chart 1



Source: Gary Wenglowski, Goldman Sachs Economics.

The facts suggest the buildup will likely add to inflation only slightly if at all in the short term. As Alice M. Rivlin, Director of the Congressional Budget Office, testified, the margin of idle capacity currently in the economy can accommodate noninflationary growth. The more difficult question is whether the defense buildup will become inflationary when the economy recovers from the present recession and enters a period of growth.

Director Rivlin testified that the buildup will become inflationary as the economy moves toward full employment of resources unless there are offsetting cuts in nondefense spending, tax increases, or "counterbalancing" monetary policy. This conclusion is supported by econometric simulations of defense spending increases comparable to the present buildup. These simulations show that defense increases are not inflationary provided they are offset by a combination of comparable tax increases and nondefense spending cuts. The available evidence demonstrates that we can afford defense spending increases provided we pay for them.

Unfortunately, the defense buildup will not be fully paid for under the present course of fiscal policy. The tax cuts enacted in 1981 will reduce Federal revenues by approximately $750 billion over the next five years. These reduced revenues when added to the increases in defense spending will overwhelm the reductions in nondefense programs. Assuming the economy enters a period of sustained economic growth and approaches full employment of resources,

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the defense buildup will add to inflationary pressures and widening deficits unless there are offsetting budget cuts or tax increases. To date, the Administration has not made proposals to demonstrate that such offsetting initiatives will be taken.

Perhaps of greater importance is the prospect that widening deficits will stifle the recovery and set the stage for stagflation or worse. This may occur as a consequence of the fiscal and monetary policies now being followed. A restrictive monetary policy while forcing prices down acts as a brake on the economy. Sluggish growth during the cyclical upturn accompanied by rising deficits could precipitate another downturn.

4. Bottlenecks, Regional and Sectoral Effects

The testimony indicated that our understanding of capacity utilization is incomplete and that the statistics may be misleading with respect to the defense sector. Because capacity utilization data are collected on an aggregated basis, it is possible for the statistics to show low utilization for industry as a whole, while critical sectors of industry are operating near or at full capacity. The same problem exists with respect to the labor market. Overall unemployment may be high while there are shortages of critical skills.

Lester Thurow testified that the stagnation experienced in the American economy over the past three years has been a

mixture of boom and depression. States such as Texas, California, Florida, and Massachusetts, and industries such as semiconductors and computers have been booming, the industrial mid-west and the steel and automobile industries have been in the midst of a depression. The idle capacity of both workers and equipment is concentrated in a few regions and industries. But the industries and regions where idle capacity exists are not those where military equipment is purchased. As a result, the defense buildup is likely to exacerbate both the shortages of resources in the high technology and defense industrial sectors, and the regional imbalances in the national economy.

The Administration believes that the defense buildup will not create industrial bottlenecks because the increase in military procurement can be anticipated by defense firms who will increase their capacity and production as demand rises. Statistics relating to some of the major industries involved in defense production lend some support to the Administration's position. Capacity appears to be adequate for the near term in primary metals, aerospace, shipbuilding, electronics, and construction. The backlogs of orders and manufacturing lead times for certain components used in defense production have also declined somewhat recently.

On the other hand, Charles L. Schultze analyzed the effects of the defense buildup on the manufacturing base and came to the "rather startling conclusion that some 30 percent of the increase in the 'goods producing' GNP over

the next four years will go to the military." Dr. Schultze concluded from this that the rapid pace of the buildup will create a bottleneck problem in the defense industries, shortages of skilled labor and specialized components, and strain the capacity for managerial oversight.

An analysis performed by George F. Brown Jr., based on an input-output matrix developed at Data Resources Inc., identifies a number of large, key defense industries where bottlenecks could occur. In these industries production will have to be increased to unprecedented levels by 1986, 30 percent or more above the peak levels previously achieved by those industries. Among this group are the aircraft engine, semiconductor, guided missile, and electronic computer industries.

There is also mounting evidence that a bottleneck problem in certain areas of the defense industry already exists and that it will intensify under the buildup. Jacques Gansler and Gail Garfield Schwartz testified that bottlenecks are present at the lower tiers of the defense industry, among smaller prime contractors, subcontractors and parts suppliers. Dr. Gansler stated that lengthy delivery delays of major weapons have been driven by lead time increases among five groups of components common to aerospace systems and supplied by small and medium sized firms: bearings, castings, connectors, forgings, and integrated circuits. The reasons for the long lead times in these areas are lack of supplier capacity, shortages of production equipment much of which is old and insufficient,

shortages of materials such as molybdenum and titanium, and shortages of skilled labor.

Dr. Gansler's studies confirm other reports of significant shortages in many defense-related labor categories including aerospace and computer scientists and engineers, skilled machinists, and tool and die makers. The labor shortages are expected to grow worse as the aging defense workforce phases out because of the long-term training and education required to produce replacements.

Dr. Schwartz testified that the lack of capacity among the smaller firms is especially troublesome because these firms face serious obstacles in expanding capacity. Due to limited ability to raise equity capital, they rely heavily on debt financing which has become nearly prohibitive because of high interest rates. The recent downward trend of interest rates is a mixed blessing for small firms as the recession and weakening demand responsible for the decline in interest rates increase the chances of bankruptcy. It is also difficult for the smaller firms to compete with the larger ones for skilled workers. Official confirmation of the bottleneck problem came from Assistant Defense Secretary Jack R. Borsting who testified:

> There likely will be certain areas where current bottlenecks in the defense industry will occur; where inflation may continue at a higher rate than in the nondefense sector; and where competition for skilled technicians will be intense.

The bottleneck problem is a serious one for two principal reasons. First, bottlenecks are a major contributing cause of cost overruns in defense procurement. The Joint Economic Committee has held numerous hearings into the causes and consequences of defense cost overruns. Hearings conducted in 1981 concerning the M-1 tank and the MX missile, together with other evidence, demonstrate that cost overruns are a continuing problem.

According to Charles L. Schultze, the major effects of the bottleneck problem that will be caused by the buildup will be larger procurement cost overruns rather than increased general inflation. The overruns would require enlarged funds or reductions elsewhere in the defense budget to pay for procurement. Dr. Schultze believes it is likely that defense cuts will have to be made to pay for the overruns and that the cuts will likely come out of standard equipment for ground forces, ammunition reserves, fuel used for training flights, and weaponry for combat training. The consequences will be reduced readiness and less capacity to use and maintain weapons in combat.

The Subcommittee received testimony that unit costs for major defense weapon systems have increased recently across the board. Table 2, prepared by Dr. Capra, shows the cost increases since January 1980 for 37 major defense systems. As can be seen from the table, many of the cost increases have been dramatic and startling.

TABLE 2

PROJECTED FISCAL YEAR 1982 UNIT COSTS
OF MAJOR WEAPON SYSTEMS
JANUARY 1980 ESTIMATE COMPARED TO MARCH 1981

Army Systems	January 1980 Estimate (Millions of $)	March 1981 Estimate (Millions of $)	Change (%)
AH64	$ 25.81	$ 29.70	+ 15%
UH60	3.71	5.54	+ 49
Roland	0.41	0.60	+ 48
Patriot	1.47	2.26	+ 53
Hellfire	0.04	0.12	+267
Pershing II	4.25	4.92	+ 16
MLRS	0.06	0.07	+ 19
Fighting Vehicle	0.90	1.35	+ 49
M-1 Tank	1.39	2.44	+ 76
Divad	4.18	5.86	+ 40
Navy Systems			
F14	$ 33.50	$ 34.48	+ 3%
F18	22.38	32.01	+ 43
SH60B	27.10	38.37	+ 42
P3C	33.49	35.59	+ 6
E2C	36.95	41.02	+ 11
SH2F	11.36	12.91	+ 14
EC130Q	30.25	37.45	+ 24
Trident I	10.34	10.88	+ 5
Sparrow	0.13	0.16	+ 22
Phoenix	1.50	2.03	+ 36
Harpoon	0.78	0.83	+ 7
Harm	0.51	0.80	+ 58
SN688	517.50	581.80	+ 12
CG47	896.40	1,018.20	+ 14
FFG-7	278.73	323.97	+ 16
MCM	87.30	99.70	+ 14
Tagos	37.65	39.13	+ 4
Air Force Systems			
A-10	$ 8.66	$ 10.40	+ 20
F-15	28.02	29.33	+ 5
F-16	11.53	12.96	+ 12
KC10	49.33	54.63	+ 11
E3A	114.35	118.00	+ 3
ALCM	1.06	1.34	+ 26
GLCM	4.20	5.80	+ 38
Sparrow	0.12	0.15	+ 19
Harm	0.45	0.66	+ 44
Maverick	0.39	0.47	+ 21

Source: James R. Capra, Federal Reserve Bank of New York.

The bottleneck problem can undermine the primary purpose of the defense buildup by escalating the costs of weapons and forcing decisions to either reduce procurement quantities or reduce funds for operations and maintenance or other activities that have a direct bearing on military readiness. James R. Capra testified, "Unless something is done about weapon system cost growth, the U.S. in the 1980s may be paying more for defense but buying less."

The second reason the bottleneck problem is important concerns possible spillover effects from the defense industry to nondefense industries and to the general economy. Spillover effects can occur with respect to shortages of materials, components, production equipment, and skilled manpower. These effects can influence price levels and the availability of supplies in the civilian sector as well as the competitiveness of civilian industries in world markets.

As the buildup proceeds, it is likely that equipment, materials, components, and skilled workers in short supply will have to be transferred from civilian to defense industries. As Professor Thurow testified, this will cause civilian production to fall and lead to civilian price increases because of the smaller available supplies among civilian users. In addition, high premiums will have to be paid by defense firms to attract the physical resources and workers out of civilian firms. This will raise wages, materials costs, and the prices of intermediate products used in both defense and civilian firms.

This process will create obstacles for American high technology firms not faced by their foreign competitors whose governments are not engaged in major defense buildups. American firms producing civilian goods will be weakened by the shift of resources to defense production. Foreign firms will not be hampered in the same way and therefore will enjoy a relative advantage.

5. Inadequate Information Base

Some of the problems concerning the adequacy of information about the defense sector have already been noted. The information available to analysts and policymakers is inadequate for a full understanding of current conditions in the defense industries or in sectors of the economy that span defense and civilian industries such as labor markets. The information gaps make it impossible for the government to monitor and accurately forecast the effects of the defense buildup on the defense industry or on the general economy.

For example, the statistical series concerning capacity utilization in the manufacturing industries are at too high a level of aggregation to permit an analysis of capacity utilization in critical areas of the defense industries such as small and medium sized suppliers. Credible data about capacity among firms producing speciality items and other detailed sectors do not exist. Another problem is that the information about production in the results of the Bureau of Census survey of plant capacity appear to be inconsistent

with other sources of information about production including the Bureau's own survey of manufacturing shipments and its annual survey of manufactures.

Little is known about the demand for and the supply of many categories of skilled labor. It is impossible to forecast with reasonable confidence whether the future supply of scientists, engineers, and skilled craft workers needed because of increased defense requirements will increase fast enough to prevent shortages before they cause price increases or delivery delays.

Little is known about the likely response of defense firms to increased defense demand. One of the Administration's underlying assumptions is that defense firms will increase investment as demand increases and that new firms will enter the growing defense market. However, defense specialists note that the practice has been for defense contractors to add to their backlogs during the boom portion of the defense business cycle in order to protect themselves against the downward swing. Good data about defense business investment behavior and whether it differs for defense prime contractors and lower tier contractors does not exist.

There is insufficient information to fully understand the response of the economy with respect to the supply of labor, parts, equipment and material, and with respect to the sectors in which the responses occur to rapid changes in the demand for defense goods. There are insufficient data

to understand the relationship of price changes for defense goods to lead times and capacity utilization.

The inadequacy of the data base helps explain the wide range of differing opinions about the ability of the defense industry to expand quickly and smoothly to meet increased demand, and about whether the defense buildup will aggravate the bottleneck problem and exert inflationary pressures on the general economy. At the present time, neither the Defense Department nor any other agency of the government is able to monitor or forecast adequately the economic effects of the buildup.

Options and Conclusions

Congress is faced with three major policy options. The first, is to approve the Administration's current budget proposal which will increase defense spending by about 7.5 percent per year in real terms.

A second option is to approve the defense proposals but cut deeper into nondefense proposals, increase taxes, or both. By doing so the short-term deficit might be reduced somewhat. Such a strategy, however, would impose fiscal restraint on the economy and would likely deepen or prolong the recession.

The third option is to slow the pace of the defense buildup. Reducing the rate of increase to 5 percent per year would produce budgetary savings of about $7 billion in fiscal year 1983 and about $90 billion over the 5 year

period 1983-87. The immediate effect of this action would be to reduce slightly the deficit and the risks of inflation and industrial bottlenecks. Of course, greater reductions would produce greater savings.

It would be important to coordinate any new defense budget initiatives with appropriate fiscal and monetary policy changes as well as with actions by the Defense Department to achieve better economic results and budgetary savings. Although the Defense Department believes that actions such as multi-year contracting will improve procurement efficiency, the evidence thus far indicates no let up in the upward spiral of weapons cost overruns. The large increases in procurement funding recently approved may already have reduced the discipline required to control costs in both government and industry. If so, unit costs of weapons systems will continue to increase and exceed estimates for their completion.

Each of the previous five Administrations began with hopes of controlling cost overruns and improving the efficiency of defense procurement. None succeeded. Unless the trend is reversed, the cycle of higher unit costs leading to increased budgets, and increased budgets contributing to higher units costs, will be perpetuated.

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